

Weekly Report 4

Group Nr. 10

1 Weekly Progress

This week, we have improved our disparity map calculation by adding the post-filtering technique (Benjamin, Siyuan) and implemented our initial triangular mesh formation via extracting point information while calculating their normals through the use of PCL (Jiesheng, Atilla).

2 Problems

If the point cloud data is too large (over 1 million points), the normal and mesh computing becomes very slow.

3 Results

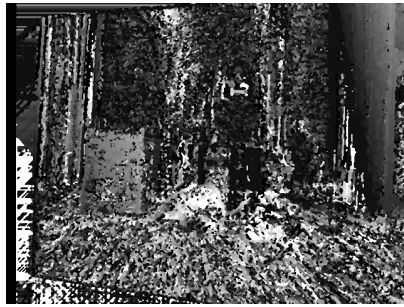


Figure 1: StereoSGBM
without filtering

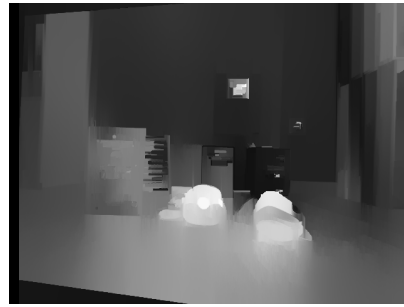


Figure 2: StereoSGBM
with filtering

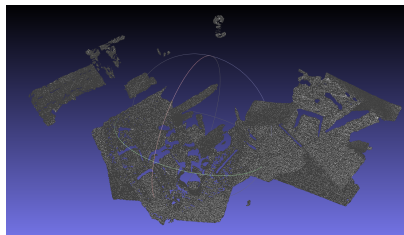


Figure 3: Triangulation result

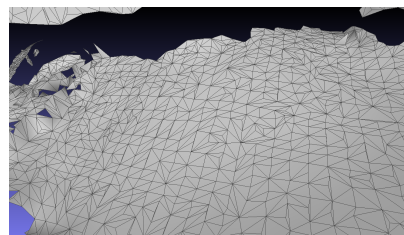


Figure 4: Triangulation details

4 Plan

For the next week, we aim to improve the triangulation process by implementing autonomously from the PCL library, and improve the custom block matching algorithm and make it more robust for different data inputs.